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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/618,800	MILLS ET AL.	
	Examiner	Art Unit	
	J. Derek Ruttan	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 April 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-4 and 6-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 April 2007 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

1. This action is in response to Applicant's submission filed 4/26/07, responding to the 12/26/06 Office action which detailed the rejection of claims 1-10. Claims 7 and 8 have been amended. Claims 1-10 remain pending in the application and have been fully considered by the examiner.

Response to Arguments

2. The cancellation of claim 5 has obviated both the drawing objections under 37 CFR 1.83(a), and the rejections of claim 5 under 35 U.S.C. 112, 1st and 2nd paragraphs. Also, the replacement drawings have obviated the objection under 37 CFR 1.84. These objections and rejections are withdrawn.

3. The objection to the specification is obviated by the specification amendment. This objection is withdrawn.

4. The amendment to the specification does not provide a clear definition of the term "storage medium." Interpretations of the term could include such non-tangible media as a transmission medium. A transmission medium is not interpreted as providing a tangible embodiment. Therefore, the rejection under 35 U.S.C. 101 is maintained. A clear definition of the term "storage medium" is required in order to overcome the rejection.

5. The amendment to claim 8 has obviated the rejection under 35 U.S.C. 112, 2nd paragraph. This rejection is withdrawn.

6. Applicant's arguments filed 4/26/07 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention (see 2nd paragraph on page 10 filed 4/26/07), it is noted that the features upon which applicant relies (i.e., "parameters that enable separation of machine geometry from process creation (see e.g. page 13, lines 28-30) when a minor step module can be created for a motion routine and the system configuration manager will independently define how the minor step module fits into a given machine(see e.g. page 14, lines 1-3)") are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In the second paragraph on page 10, filed 4/26/07, Applicants argue that *Becker*'s cut-off interconnections do not provide machine configuration independent of minor step modules. However, *Becker*'s interconnection module permits independent configuration using the cut-off interconnections. Applicants have not clearly explained why this would not provide configuration independence. Reasonable broad interpretation (as required by MPEP 2111) allows *Becker*'s interconnection module to provide this limitation.

At the bottom of page 10, filed 4/26/07, Applicants argue that *Becker* fails to disclose the features of claim 2, which includes a major step module assembled from a plurality of said minor step modules to perform a larger machine function. Applicant is directed to paragraph [0023] as cited in the Office action, as well as Figure 2, which shows a "compound" object assembled from a plurality of "automation objects." In this case, the compound object is interpreted as a major step module which is assembled from a plurality of minor step modules.

In the second paragraph at the top of page 11, Applicants essentially argue that *Becker*'s "compounds" cannot be considered equivalent to the claimed minor step modules. Applicants' arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the

patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. It is not clear why *Becker's* compounds could not be considered equivalent to the claimed minor step modules. Reasonable broad interpretation is made in view of the plain language of the claims. *Becker's* compounds can be assembled to provide an automation procedure as claimed in claim 7. Applicants have not provided any reasoning to the contrary.

In paragraphs 2 and 3 on page 12, and in the 1st paragraph on page 13, Applicants essentially argue that there is no suggestion to combine the references. In response to Applicants' argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, motivation to combine is found in the references themselves. Applicants' have admitted that the prior art provides a suggested advantage to a combination (see paragraph 3 on page 12 and paragraph 1 on page 13). The strongest rationale for combining references is a recognition, expressly or impliedly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent, that some advantage or expected beneficial result would have been produced by their combination. *In re Sernaker*, 702 F.2d 989, 994-95, 217 USPQ 1, 5-6 (Fed. Cir. 1983). Therefore, the advantages suggested by the prior art provides the necessary motivation to combine.

Further arguments are based upon prior arguments as addressed above, and are not persuasive for the same reasons.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claim 10 is rejected under 35 U.S.C. 101 because it is directed to a “storage medium”.

The originally filed specification does not provide a clear definition of a “storage medium.” The lack of a clear definition of a “medium” does not limit the medium to a tangible embodiment, and could be interpreted to include such non-tangible media as wireless transmission media, or an electro-magnetic signal. Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101. First, a claimed signal is clearly not a "process" under § 101 because it is not a series of steps. A claimed signal has no physical structure, does not itself perform any useful, concrete and tangible result and, thus, does not fit within the definition of a machine. A claimed signal is not matter, but a form of energy, and therefore is not a composition of matter. A product is a tangible physical article or object, some form of matter, which a signal is not. In contrast, a tangibly claimed computer-readable medium (e.g. magnetic or optical disk) encoded with a data structure defines structural and functional interrelationships between the data structure and the

computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. For further information, see Official Gazette, Nov. 22, 2005, 1300 OG 142, "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", which can be found online at <<http://www.uspto.gov/web/offices/com/og/2005/week47/patgupa.htm>>.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 2 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by US

Patent Application Publication No. US 2002/0073094 A1 by Becker et al. (hereinafter

"Becker").

In regard to claim 1, Becker discloses:

A modular system for programming machine automation controls (See Figures 1 and 2), comprising:

a library of minor step modules; See Fig. 2 element "B", also paragraph [0024], e.g. "models V1, V3 of a library B."

a procedure creator for creating a machine automation procedure from an assembly of said minor step modules; See paragraph [0024], e.g. "function CC"

a product type manager for inputting product parameters independent of said minor step modules; See paragraphs [0021] and [0026], e.g. “parameterizing module.”

Note that the parameterizing module affects the compound, not the modules in the library.

a system configuration manager for defining machine configuration independent of said minor step modules; and See Fig. 1, element F3, and paragraphs [0020] and [0026], e.g. “Interconnection module F3.” The interconnection module defines configuration by connection with other objects.

an execution engine for calling said procedure and maintaining information flow in and out of said minor step modules. See Fig. 1, element F5, and paragraph [0022], e.g. “Automation object management F5.” Note that automation objects (i.e. procedures) would be unable to be inserted if they could not be called.

In regard to claim 2, the above rejection of claim 1 is incorporated. Becker further discloses: *wherein procedures can further include major step modules assembled from a plurality of said minor step modules to perform a larger machine function. See paragraph [0023].*

In regard to claim 7, Becker discloses:

A modular method for programming machine automation controls. See paragraphs [0025] and [0026]. All further limitations have been addressed in the above rejection of claim 1.

In regard to claim 8, the above rejection of claim 7 is incorporated. All further limitations have been addressed in the above rejection of claim 2.

In regard to claim 9, all limitations have been addressed in the above rejection of claim 1. Note that the system of claim 1 is broadly interpreted as being implemented using software “modules.” If these components were not modules, then they could not be described as functioning separately.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker as applied to claim 2 above, and further in view of US Patent No. 6,061,602 to Meyer (hereinafter “Meyer”).

In regard to claim 3, the above rejection of claim 2 is incorporated. Becker further discloses: *wherein procedures are created from one or more components selected from the group consisting of major step, minor step,* See above rejection of claims 1 and 2. Becker does not expressly disclose *repeat, and if statement.* However, Meyer teaches

programming with repeat and if constructs. See Fig. 5, depicting a control loop (i.e. repeat) and conditional statements (i.e. “if statements”). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Meyer’s teaching of programming with Becker’s components since these provide fundamental programming concepts without requiring standard software programming code (see Meyer column 2 lines 15-20).

In regard to claim 4, the above rejection of claim 1 is incorporated. Becker further discloses: *output display*. See paragraph [0031], e.g. “visual programming.” Becker does not expressly disclose *an information center to provide a common screen*. However, Meyer teaches collecting icons in a display providing a common screen. See column 3 line 63 – column 4 line 7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Meyer’s teaching of information displays with Becker’s visual programming in order to interactively develop automation applications (see Meyer column 4 lines 3-7).

13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Becker as applied to claim 1 above, and further in view of US Patent Application Publication No. US 2002/0035403 A1 by Clark et al. (hereinafter “Clark”).

In regard to claim 5, the above rejection of claim 1 is incorporated. Becker does not expressly disclose: *wherein security can be set to a plurality of access levels by*

leveraging an existing security model to provide full access to some [users], while limiting access to other [users]. However, Clark teaches that a security model is leveraged to set security to an access level in order to regulate access. See paragraph [0046], e.g. “authenticate for root level access.” It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Clark’s teaching of security with Becker’s system in order to restrict operation to authenticated users (see Clark paragraph [0046]).

14. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker as applied to claim 1 above, and further in view of US Patent No. 6,161,217 to Detlefs et al. (hereinafter “Detlefs”).

In regard to claim 6, the above rejection of claim 1 is incorporated. Becker does not expressly disclose: *wherein one or more minor step modules are directly embedded within the execution engine for improved performance.* However, Detlefs teaches that modules can be “inlined” (i.e. embedded) into procedures to improve performance. See column 2 lines 53-62. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Detlefs’ teaching of inlining with Becker’s modules in order to improve performance (see Detlefs column 2 lines 53-62).

In regard to claim 10, Becker does not expressly disclose: *A storage medium readable by a computer encoding a computer process.* All further limitations have been

addressed in the above rejection of claim 1. However, Detlefs teaches that a storage medium is used to encode a computer process. See column 1 lines 32-36. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Detlefs' storage medium with Becker's system in order to configure a computer to implement the system (see Detlefs column 1 lines 35-36).

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Derek Rutten whose telephone number is (571)272-3703. The examiner can normally be reached on M-F 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571)272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jdr


TUAN DAM
SUPERVISORY PATENT EXAMINER